REMARKS/ARGUMENTS

Claims 1-38 are pending in this application. Applicants note that the elected species is species B, corresponding to Fig. 2. Please note Applicants' response dated July 12, 2004, to the election of species requirement. As will be explained below, Applicants believe the withdrawn claims (claims 12-14, 24-29 and 38) should be rejoined in this application because the independent claims 1, 23 and 30 from which they depend should be found allowable and generic.

Claims 1, 4 and 34 are amended herein.

Applicants initially thank Examiner for allowing claims 15-22.

Applicants also thank Examiner for noting the allowability of claims 4-11 and 34-37 if claims 4 and 34 are rewritten in independent form including all of the limitations of the base claim and any intervening claims. Accordingly, Applicants herein rewrite claims 4 and 34 in independent form according to Examiner's suggestions. Therefore, it is respectfully submitted that claims 4, 34 and respective dependant claims 5-11 and 35-37 are in allowable form. Withdrawal of the objections to these claims for being dependant from an allegedly unallowable claim is kindly requested.

I. OBJECTIONS TO THE DISCLOSURE

The Examiner has made several objections to the disclosure, and Applicants have made the suggested corrections, with one exception. In the top paragraph on page 4, the Examiner believes the "drain" and "source" with respect to transistors 15 and 17 have been reversed. Applicants submit the recitations are correct as they stand. Transistors 15 and 17 are P channel devices. Accordingly, when I_{DS} of transistor 10A increases, V_{DS} across transistor 10A increases, as shown in Fig. 1B. The current I_S also increases, causing the voltage at the non-inverting input terminal of amplifier 19 to decrease. This causes the output of amplifier 19 to decrease, driving the P channel device 15 so that the current I_S increases until the potential at the source of cell 10B equals the potential at the source of cell 10A. (See, Spec., page 5, line 24 to page 6, line 6). In this way, the voltage across resistor R becomes a measure of the current in the power MOSFET 10. Accordingly, it is submitted that the paragraph, as written, is correct.

II. OBJECTIONS TO CLAIM 1

Claim 1 stands objected to for various informalities. Claim 1 has been amended herein in accordance with Examiner's suggestions to cure all alleged informalities. It is

AMENDMENTS TO THE DRAWING

Submitted herewith on a separate sheet of paper is a "Request for Entry of Proposed Drawing Corrections", together with a red-lined version of the Figure 1 showing "Rdg" as "R_{DG}".

Attachment: "Request for Entry of Proposed Drawing Corrections"

respectfully submitted that no new matter has been added to claim 1. Therefore, Applicants kindly request the withdrawal of all objections to claim 1.

III. REJECTIONS OF CLAIMS 1-3, 23 AND 30-33 UNDER 35 U.S.C. §102(b)

Claims 1-3, 23 and 30-33 stand rejected under 35 U.S.C. §102(b) as being anticipated by Osborn et al, U.S. Patent No. 5,796,278 (hereinafter "Osborn"). Applicant herein traverses these rejections.

Claims 1 and 23 at least recite an "[a]pparatus for indirectly sensing the temperature of a power MOS device" having "a comparator coupled to receive at a first input the voltage related to the drain-source voltage of the power MOS device and at a second input a voltage related to the current in the power MOS device." (Claims 1 and 23).

In contrast, Osborn teaches the comparator at circuit 230 with a "non-inverting input connected to a controllable current source 240 and to one end of a resistor R_1." (Osborn, col. 6, line 62 to col. 7, line 3). "Comparator 230 further includes an inverting input connected to . . . one end of a sense resistor R_{SNS} 222, and to a non-inverting input of a comparator 244." Id.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 U.S.P.Q.2d (BNA) 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ...claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 U.S.P.Q.2d (BNA) 1913, 1920 (Fed. Cir. 1989); M.P.E.P. § 1231.01.

Applying the above standard, Osborn does not "inherently or expressly describe" "each and every element as set forth in . . . claim[s]" 1, 23 and 30. The Examiner states that the recited "comparator" reads on Osborn circuit 230; however, comparator 230 generates a signal determined by an inequality between the current provided by "current source 240" and a voltage at node 234 that is proportional to the current through R_{SNS} 222. (Osborn, col. 6, line 62 to col. 7, line 3). In contrast, the comparator as claimed in claims 1, 23 and 30 is coupled to receive at a first input a voltage related to the drain-source voltage of the power MOS device. Neither of the inputs to comparator 230 of Osborn is a voltage related to the drain-source voltage of the power MOS device as claimed in claims 1, 23 and 30. Accordingly, Osborn simply does not recite each and every element as set forth in claims 1, 23 and 30.

As recited in the specification of the present application, the aim of the invention is to "indirectly determin[e] the temperature of the power semiconductor device, in particular, a power MOSFET by sensing the ON drain-source resistance, i.e., R_{DSON} and thus the voltage between drain and source of the power MOSFET device." (Spec., page 1, line 23 to page 2, line 3). Osborn does not teach or suggest this and his circuit does not sense the drain-source voltage for this purpose.

For at least the forgoing reasons, it is respectfully submitted that clams 1, 23 and 30 are not anticipated by Osborn. Therefore, Applicants kindly request that the rejections of claims 1 and 23 and 30 as anticipated under 35 U.S.C. § 102(b) over Osborn be withdrawn.

Claims 2-3 ultimately depend from allowable claim 1. Therefore, it is also requested that rejection of these claims as anticipated under 35 U.S.C. § 102(b) over Osborn be withdrawn for at least the above said reasons.

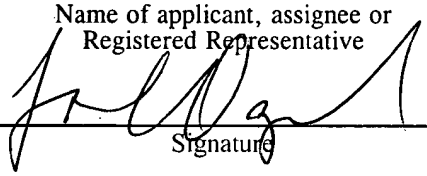
Claims 31-33 ultimately depend from allowable claim 30. Therefore, it is also requested that rejection of these claims as anticipated under 35 U.S.C. § 102(b) over Osborn be withdrawn for at least the above said reasons.

Since claims 1, 23 and 30 are generic, it is requested that the withdrawn claims be rejoined in this application.

In view of the above, Applicant submits that all claims in this application are now in condition for allowance, prompt notification of which is requested.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on September 27, 2004:

Louis C. Dujmich
Name of applicant, assignee or Registered Representative



Signature

September 27, 2004
Date of Signature

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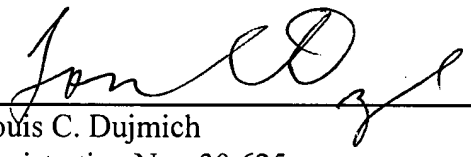
Respectfully submitted,



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